We claim:

1. A spinal fusion implant, comprising:

a bone portion having an upper bone engaging surface, a lower bone engaging surface, a first sidewall and an opposite second sidewall extending between said upper and lower bone engaging surfaces, said first sidewall having a portion defined by a concave surface.

2. The implant of claim 1, wherein said bone portion is formed from a donor bone segment defining at least a portion of a medullary canal and said concave surface defines a portion of said medullary canal.

3. The implant of claim 1, wherein said upper and lower bone engaging surfaces include a roughened surface.

4. The implant of claim 3, wherein said roughened surface includes grooves.

5. A spinal fusion implant formed from bone, the implant comprising

a first end adapted to receive an implant tool, the first end having at least one tool engaging recess provided for mating engagement with a projection on an implant insertion tool;

a second end distal from the first end; and

an elongated body disposed between said first and second ends and defining a longitudinal axis along a length of the implant and wherein the body is provided with a concave surface wherein at least a portion of the concave surface approximates a section of the medullary canal from a long bone.

6. The implant of claim 5 wherein the at least one tool engaging recess defines an elongated cylinder having an axis substantially parallel to the longitudinal axis.

7. The implant of claim 5 wherein the at least one tool engaging hole includes a threaded bore.

8. The implant of claim 5 wherein the at least one tool engaging hole includes a substantially smooth bore.

9. The implant of claim 5 wherein the at least one tool engaging hole extends through the implant.

10. The implant of claim 6 wherein the at least one tool engaging hole extends to a depth of about 80% of the length of the body.

11. The implant of claim 5 wherein the elongated body further comprises at least one tool engaging recess defining an cylinder having an axis substantially perpendicular to the longitudinal axis.

12. The implant of claim 11 wherein the body further includes a slot surrounding the at least one tool engaging recess.

13. The implant of claim 5 wherein the second end includes a curved surface.

14. The implant of claim 5 and further including at least one aperture extending therethrough for receiving osteogenic material.

15. The implant of claim 5 further comprising an osteogenic material packed within the a recessed area defined by the convex surface.

16. The implant of claim 15 wherein the osteogenic material is selected from a group consisting essentially of autograft, allograft, xenograft, demineralized bone, a calcium phosphate material, or bioceramic , a bioglass, an osteoinductive factor resorbable plastic polymer composite or mixtures thereof.

17. The implant of claim 5 wherein the body is about 15 to about 30 mm long.

18. The implant of claim 5 wherein the outer surface further includes ridges for engaging bone surfaces.

19. The implant of claim 5 wherein the body is prepared from cortical bone.

20. The implant of claim 5 wherein the body includes cancellous bone tissue.

21. The implant of claim 5 wherein the body is provided substantially in the form of a J-shape and wherein the concave surface defines the crook of the J-shape.

22. The implant of claim 21 wherein the tool receiving recess defines a slot positioned substantially perpendicular to the longitudinal axis.

23. The implant of claim 21 wherein the body further includes tool insertion recesses.

24. The spinal fusion implant of claim 21 wherein the outer surface further includes surface features for engaging bone.

25. The implant of claim 5 wherein the body is substantially crescent shaped.

26. The implant of claim 25 wherein the at least one tool engaging recess defines a cylinder having an axis substantially parallel to the longitudinal axis.

27. The implant of claim 25 wherein the at least one tool engaging recess defines a cylinder extending through the implant.

28. The implant of claim 25 wherein the at least one tool engaging recess defines a cylinder extending about 80% of the length of the body.

29. The implant of claim 27 wherein the tool engaging recess defines a cylinder having a smooth bore.

30. The implant of claim 24 wherein the tool engaging recess defines a cylinder having internal threads.

31. The implant of claim 22 wherein the implant includes an outer surface having a series of ridges for engaging bone surfaces.

32. A spinal fusion implant for positioning within a cavity in an intervertebral space defined by the inferior surface of a first vertebra and an opposing superior surface of an adjacent second vertebrae, wherein the implant is formed from a portion of a diaphysis of a long bone having a medullary canal, said implant comprising:

a first end adapted for engaging an implant holder the first end having at least one tool engaging recess provided for matingly engagement of a projection on an implant tool,

a second end distal from the first end; and

an elongated body disposed between the first and second ends and defining a longitudinal axis along a length of the implant and wherein the body is provided with an upper bone engaging surface, a lower bone engaging surface, and a concave surface extending between said upper and lower bone engaging surfaces, wherein at least a portion of the concave surface is formed from a section of the medullary canal from the long bone.

33. The spinal fusion implant of claim 32 wherein said concave surface and the inferior and superior surfaces define a chamber for receiving osteogenic material.

34. An implant holder for releasably securing a spinal fusion implant, the holder comprising:

a shaft defining a proximal end and an opposite distal end with a longitudinal axis extending between said proximal and distal ends, said shaft including an upper branch, a lower branch and a channel therebetween; and

a gripping head attached to said distal end, said gripping head including an upper branch extension attached to the upper branch, a lower branch extension attached to the lower branch, wherein the lower branch extension includes an impacting first surface and a second surface

abutting the first surface and positioned to lie substantially parallel to the longitudinal axis and wherein the upper branch extension includes an impacting third surface and a fourth surface extending distally beyond said lower branch extension and adapted to matingly engage one side of a secured implant; and

a closure device movably mounted on said shaft, said closure device movable between a holding position urging said upper and lower branches together and a released position allowing movement of said upper and lower branches.

35. The implant of claim 34 wherein the impacting first surface and impacting third surface includes an implant engaging projection.

36. The implant holder of claim 34 wherein the second surface is adapted to matingly engage a tool engaging recess in an implant.

37. The implant holder of claim 36 wherein the shaft further includes a coupling point for attaching a handle or an impacting tool.

38. An implant holder for releasably securing a spinal fusion implant, the holder comprising:

a shaft defining a longitudinal axis and having a proximal end and an opposite distal end;

a gripping head attached to the distal end of the shaft, the gripping head provided with an impacting first surface positioned to lie substantially perpendicular to the longitudinal direction and a second surface abutting the first surface and substantially perpendicular to the first surface, the second surface adapted for controlling lateral motion of a secured implant; and

a pin extending from the first surface substantially parallel to the longitudinal axis.

39. The implant holder of claim 35 wherein a portion of the pin is radiopaque.

40. The implant holder of claim 38 wherein the shaft is hollow and the gripping head further includes a passageway through the first surface and into the shaft for receiving said pin therein.

41. The implant holder of claim 40 wherein the shaft includes means for extending said pin.

42. The implant holder of claim 40 wherein the second surface abuts the first impacting surface and defines an included obtuse angle with the first impacting surface.

43. The implant holder of claim 35 wherein the second surface abuts the first impacting surface and defines an included acute angle with the first impacting surface.

44. The implant holder of claim 45 wherein the gripping head further includes a third surface abutting the first surface and positioned to lie substantially parallel to the longitudinal axis.

45. The implant holder of claim 40 wherein the impacting first surface is roughened.

46. A chisel for cutting tissue from a first inferior surface of a first vertebrae and an opposing second superior surface of a second vertebrae adjacent to the first vertebrae, the chisel comprising:

a shaft; and

a cutting head mounted on the second end of the shaft, the cutting head including a first non-cutting edge attached to a first arm, a second non-cutting edge attached to an opposite second arm and a first cutting blade and a second cutting blade disposed between said first and second arms wherein said first non-cutting edge and said second non-cutting edge extend distally beyond said first and second cutting blades, thereby contacting the first and second surfaces to guide the first and second cutting blades.

47. The chisel of claim 46 wherein the cutting head further includes index markings for determining the depth of cut.

48. The chisel of claim 46 wherein the shaft further includes a depth stop.

49. The chisel of claim 46 wherein the shaft is adapted to be sliceable received within a guide sleeve.

50. A nerve retractor assembly for manipulation of the spinal neurostructure, the assembly comprising,

a retractor blade;

a retractor body adapted for unobstructed view of the retracted area wherein the retractor body is provided with a channel adapted to receive the retractor blade.

51. The nerve retractor assembly of claim 50 wherein the retractor body further includes at least one supporting member mounted thereon for attaching a retractor pin, and

a retractor pin attached to a first one of the at least one supporting member for fixedly positioning the retractor blade relative to the neural structure.

52. The nerve retractor assembly of claim 50 wherein the at least one supporting member defines a hollow tube for receiving a retractor pin.

53. The nerve retractor assembly of claim 50 wherein the channel is a concave channel.

54. The nerve retractor assembly of claim 50 and further including a second retractor pin having a handle and a shaft disposed between the pin and the handle and slideably received in the at least one supporting members.

55. A nerve retractor assembly for manipulation of the spinal neurostructure, the assembly comprising:

a retractor body adopted for undistracted view of the retracted area, the retractor body including at least one supporting member mounted thereon for attaching a retractor pin, and

at least one retractor pin attached to the supporting member.

56. A method of preparing intervertebral space for receiving a posterior lumbar interbody fusion implant, the method comprising:

preparing a cavity in the intervertebral space by removing a portion of opposing surfaces of adjacent vertebrae defining the intervertebral space using the chisel of claim 46.

57. A method of restoring disc height and biomechanical stability to patent after discectomy, the method comprising:

distracting two adjacent vertebrae to provide a desired intervertebral space height;

preparing opposing surfaces of the two adjacent vertebrae to provide a cavity for receiving a spinal fusion implant using the box chisel of claim 46; and

inserting a spinal fusion implant in the cavity.

58. A method of preparing a implant for a posterior lumbar interbody fusion, the method comprising forming an implant having a substantially elongated body from a bone remnant left from the manufacture of a bone dowel from a long bone.

59. The method of claim 58 wherein the implant has sufficient width to withstand a compressional force of about 30,000 Newtons.

60 A round scraper for removal of tissue, the round scraper defining a longitudinal axis and comprising:

a first arm extending substantially parallel to the longitudinal axis,

a second arm spaced from the first arm and extending substantially parallel to the longitudinal wherein the first arm and the second arm define a cavity therebetween, and

a tip disposed between the first arm and the second arm wherein the tip includes a first upper cutting edge and a second lower cutting edge and a curved surface disposed between the first cutting edge and the second cutting edge.

61. The round scraper of claim 60 wherein the first arm further includes a first upper flat surface and a second lower flat surface and the second arm further includes a third upper flat surface and a fourth lower flat surface.

62. A bone graft loader for depositing osteogenic material in an intervertebral space, the bone graft loader comprising:

a body surrounding a hollow shaft wherein the body includes a first wall and a second wall, the second wall including an opening into the shaft,

a pivot plate pivotally mounted within the shaft and having a surface proximal to the opening wherein the surface is adapted for receipt of osteogenic material, and

a plunger slidably received with the shaft and disposed between the pivot plate and the first wall.